# DECISION DOCUMENT

Sendero Verde Redevelopment Project - Parcel A
Brownfield Cleanup Program
New York, New York County
Site No. C231135
May 2021

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

# DECLARATION STATEMENT - DECISION DOCUMENT

Sendero Verde Redevelopment Project - Parcel A
Brownfield Cleanup Program
New York, New York County
Site No. C231135
May 2021

**Statement of Purpose and Basis**

This document presents the remedy for the Sendero Verde Redevelopment Project - Parcel A site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Sendero Verde Redevelopment Project - Parcel A site and the public's input to the proposed remedy presented by the Department.

**Description of Selected Remedy**

The elements of the selected remedy are as follows:

**1. Remedial Design**
A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and Site management of the remedy as per DER 31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable redevelopment.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this Site, any future on-site buildings will include, at

a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

**2. Excavation**

- Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs as defined by 6 NYCRR Part 375-6.8 in the Track 1 areas of the site.
- Excavation and off-site disposal of all on-site soils which exceed restricted residential SCOs as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet in the Track 2 areas of the site. If a Track 1 unrestricted cleanup or Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy in those locations.
- Excavation and off-site disposal of all on-site soils which exceed restricted residential SCOs as defined by 6 NYCRR Part 375-6.8 in the upper 2 feet in the Track 4 portion of the site.

A total of approximately 10,050 cubic yards (cy) of contaminated soil will be removed from the site.

**3. Backfill**

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and/or complete the backfilling of the excavation and establish the designed grades at the site.

**4. Groundwater Extraction & Treatment**

Groundwater extraction and treatment will be implemented to facilitate remedial excavation. The extracted groundwater will be treated using prior to discharge to the municipal sewer.

**5. Cover System**

A site cover will be required in the Track 4 area of the site to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

**6. Vapor Intrusion Evaluation**

As part of the remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

**7. Institutional Control**

Imposition of an institutional control in the form of an Environmental Easement for the portions of the site that do not achieve a Track 1 unrestricted use cleanup which will:

- require the remedial party or site owner to complete and submit to the NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential, commercial or industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or the NYCDOHMH; and
- requires compliance with the Department approved Site Management Plan.

**8. Site Management Plan**

A Site Management Plan (SMP) is required for all portions of the site that do not achieve a Track 1 unrestricted use cleanup which includes the following:

a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement for the Track 4 area of the site discussed above; and
   - Engineering Controls: The cover system for the Track 4 area of the site discussed above.

   This plan includes, but may not be limited to:
   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
   - descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
   - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provisions for implementing actions recommended to address exposures related to soil vapor intrusion;
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and Department notification; and
   - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

## Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

May 21, 2021

Date

Gerard Burke, Director
Remedial Bureau B

# DECISION DOCUMENT

Sendero Verde Redevelopment Project - Parcel A
New York, New York County
Site No. C231135
May 2021

## SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

## SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C231135

Aguilar Public Library
174 East 110th Street
New York, NY 10029

Manhattan Community Board 11
1664 Park Avenue, Ground Floor
New York, NY 10035

**Receive Site Citizen Participation Information By Email**

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

## SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The site is located at 50 East 112th Street and is bounded by Madison Avenue to the west, Sendero Verde Redevelopment Project - Parcel B (BCP Site #C231128) to the east, a 4 story commercial building to the south, and East 112th Street to the north. The site occupies Tax Lot 120 of Tax Block 1617 and encompasses approximately 0.32 acres.

Site Features:
The site is currently a vacant, unpaved lot surrounded by chain-link fence. Most recently, the site was utilized as community gardens, which were vacated in February 2018.

Current Zoning and Land Use:
The site is currently zoned R9 residential with a C2-5 commercial overlay. The area surrounding the site is currently developed with low to high-rise multi-family residential buildings, commercial and office buildings, and mixed use residential and commercial properties. Surrounding property use to the north of the site across East 112th Street is residential with multiple high-rise residential buildings. Immediately south is a 4-story mixed residential and commercial building. To the east beyond the Sendero Verde Redevelopment Project - Parcel B site are the elevated tracks of the Metro North Railroad. To the west across Madison Avenue, is residential with a part five-, part seven-story residential building.

Past Use of the Site:
Past uses of the site included residential and commercial. Numerous residential and commercial dwellings existed on-site between 1896 and 1982. Portions of the site operated as a bakery (1963), Mohawk Fuel Co. (1938) and shoe stores (between 1938 and 1956).

Site Geology & Hydrogeology:
The land surface elevation ranges from 16 to 18 feet relative to mean sea level. The site is underlain by urban fill to depths of between 11 to 15 feet below land surface (ft bls), with fill extending to 20 ft bls at one location. Groundwater is generally encountered between approximately 13 to 15 ft bls and flows southeast towards the Harlem River, which is located approximately 3,300 feet southeast of the site.

A site location map is attached as Figure 1.

## SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

## SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Applicant(s) does/do not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

## SECTION 6: SITE CONTAMINATION

### 6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

### 6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

### 6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

| | |
|---|---|
| lead | chrysene |
| mercury | indeno(1,2,3-cd)pyrene |
| chloroform | arsenic |
| tetrachloroethene (PCE) | barium |
| benzo(a)anthracene | cadmium |
| benzo(a)pyrene | copper |
| benzo(b)fluoranthene | silver |
| benzo(k)fluoranthene | zinc |

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

## 6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Underground Storage Tank (UST) Removal

The UST removal entailed the steps detailed below:

- Removal of all fluids in the UST using a vacuum truck.
- Excavation, removal and proper off-site disposal of the tank.
- Collection and analysis of post-removal soil samples from the bottom and sides of the UST excavation.

The IRM activities will be documented in the Final Engineering Report.

### 6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:

Soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides and emerging contaminants. Soil vapor samples were analyzed for VOCs. Based upon investigations conducted to date, the primary contaminants of concern are chlorinated VOCs, SVOCs and metals.

Soil - The only VOC detected in soil exceeding the applicable unrestricted use soil cleanup objectives (UUSCOs) was acetone, which is a common laboratory contaminant. SVOCs were detected at concentrations exceeding the UUSCOs in soil including benzo(a)anthracene at a maximum concentration of 3.5 parts per million, or ppm (UUSCO 1 ppm), benzo(a)pyrene at a maximum concentration of 5.3 ppm (UUSCO 1 ppm), benzo(b)fluoranthene at a maximum concentration of 7.4 ppm (UUSCO 1 ppm) and benzo(k)fluoranthene at a maximum concentration of 1.9 ppm (UUSCO 0.8 ppm), chrysene at a maximum concentration of 4.9 ppm (UUSCO 1 ppm), and indeno(1,2,3-cd)pyrene at a maximum concentration of 4.4 ppm (UUSCO 0.5 ppm).

Metals were detected in soil at concentrations exceeding the UUSCOs including arsenic at a maximum concentration of 21 ppm (UUSCO 13 ppm), barium at a maximum concentration of 1,180 ppm (UUSCO 350 ppm), cadmium at a maximum concentration of 2.64 ppm (UUSCO 2.5 ppm), copper at a maximum concentration of 87 ppm (UUSCO 50 ppm), lead at a maximum concentration of 1,430 ppm (UUSCO 63 ppm), mercury at a maximum concentration of 6.8 ppm (UUSCO 0.18 ppm), silver at a maximum concentration of 4.12 ppm (UUSCO 2 ppm) and zinc at a maximum concentration of 1,150 ppm (UUSCO 109 ppm).

PCBs were detected at a maximum concentration of 0.146 ppm (UUSCO 0.1 ppm). Pesticides were detected at concentrations exceeding the UUSCOs including dieldrin at a maximum concentration of 0.132 ppm (UUSCO 0.005 ppm), 4,4'-DDD at a maximum concentration of

0.186 ppm (UUSCO 0.0033 ppm), 4,4'-DDE at a maximum concentration of 0.238 ppm (UUSCO 0.0033 ppm) and 4,4'-DDT at a maximum concentration of 1.1 ppm (UUSCO 0.0033 ppm).

PFAS compounds were found in soil including perfluorooctanesulfonic acid (PFOS) at a maximum concentration of 37.1 parts per billion (ppb) compared to the Unrestricted Use Guidance Value (UUGV) of 0.88 ppb, and perfluorooctanoic acid (PFOA) at a maximum concentration of 0.987 ppb (UUGV 0.66 ppb).

Data does not indicate any off-site impacts in soil related to this site.

Groundwater – VOCs detected in groundwater exceeding the NYSDEC Ambient Water Quality Standards (AWQS) include chloroform at a maximum concentration 17 ppb (AWQS 7 ppb) and tetrachloroethene (PCE) at a maximum concentration of 47 ppb (AWQS 5 ppb).

SVOCs detected in groundwater above the AWQS include benzo(A)pyrene at a maximum concentration of 0.03 ppb (AWQS is non-detect), benzo(b)fluoranthene at a maximum concentration of 0.04 ppb (AWQS 0.002 ppb), benzo(k)fluoranthene at a maximum concentration of 0.03 ppb (AWQS 0.002 ppb), chrysene at a maximum concentration of 0.04 ppb (AWQS 0.002 ppb) and indeno(1,2,3-cd)pyrene at a maximum concentration of 0.03 ppb (AWQS 0.002 ppb).

PFAS compounds detected in groundwater include PFOS at a maximum concentration of 40 parts per trillion (ppt) compared to the Maximum Contaminant Limit of 10 ppt, and PFOA at a maximum concentration of 17.8 ppt (MCL 10 ppt).

No metals, except for those naturally occurring, exceeded their AWQSs. No PCBs or pesticides were detected in groundwater.

Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor - Soil vapor at the site contains chlorinated VOCs including PCE at a maximum concentration of 197 micrograms per cubic meter (ug/m3), trichloroethene (TCE) at a maximum concentration of 6.72 ug/m3 and chloroform at a maximum concentration of 48.1 ug/m3.

Data does not indicate any off-site impacts in soil vapor related to this site.

### 6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

People are not expected to come into contact with contaminated soil or groundwater since site access is restricted by a fence. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different

source not affected by this contamination. Because the site is currently vacant, soil vapor intrusion does not represent a concern for the site in its current condition. Environmental sampling also indicates that soil vapor intrusion from site contaminants is not a concern for off-site buildings.

### 6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

**Groundwater**

**RAOs for Public Health Protection**

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

**RAOs for Environmental Protection**

- Remove the source of ground or surface water contamination.

**Soil**

**RAOs for Public Health Protection**

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

**RAOs for Environmental Protection**

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

**Soil Vapor**

**RAOs for Public Health Protection**

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

## SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Multiple Cleanup Tracks remedy.

The selected remedy is referred to as the Excavation and Partial Site Cover remedy.

The elements of the selected remedy, as shown in Figures 2 and 3, are as follows:

**1. Remedial Design**

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and Site management of the remedy as per DER 31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable redevelopment.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this Site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

**2. Excavation**

- Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs as defined by 6 NYCRR Part 375-6.8 in the Track 1 areas of the site.
- Excavation and off-site disposal of all on-site soils which exceed restricted residential SCOs as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet in the Track 2 areas of the site. If a Track 1 unrestricted cleanup or Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy in those locations.
- Excavation and off-site disposal of all on-site soils which exceed restricted residential SCOs as defined by 6 NYCRR Part 375-6.8 in the upper 2 feet in the Track 4 portion of the site.

A total of approximately 10,050 cubic yards (cy) of contaminated soil will be removed from the site.

**3. Backfill**

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and/or complete the backfilling of the excavation and establish the designed grades at the site.

**4. Groundwater Extraction & Treatment**
Groundwater extraction and treatment will be implemented to facilitate remedial excavation. The extracted groundwater will be treated using prior to discharge to the municipal sewer.

**5. Cover System**
A site cover will be required in the Track 4 area of the site to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

**6. Vapor Intrusion Evaluation**
As part of the remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

**7. Institutional Control**
Imposition of an institutional control in the form of an Environmental Easement for the portions of the site that do not achieve a Track 1 unrestricted use cleanup which will:

- require the remedial party or site owner to complete and submit to the NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential, commercial or industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or the NYCDOHMH; and
- requires compliance with the Department approved Site Management Plan.

**8. Site Management Plan**
A Site Management Plan (SMP) is required for all portions of the site that do not achieve a Track 1 unrestricted use cleanup which includes the following:

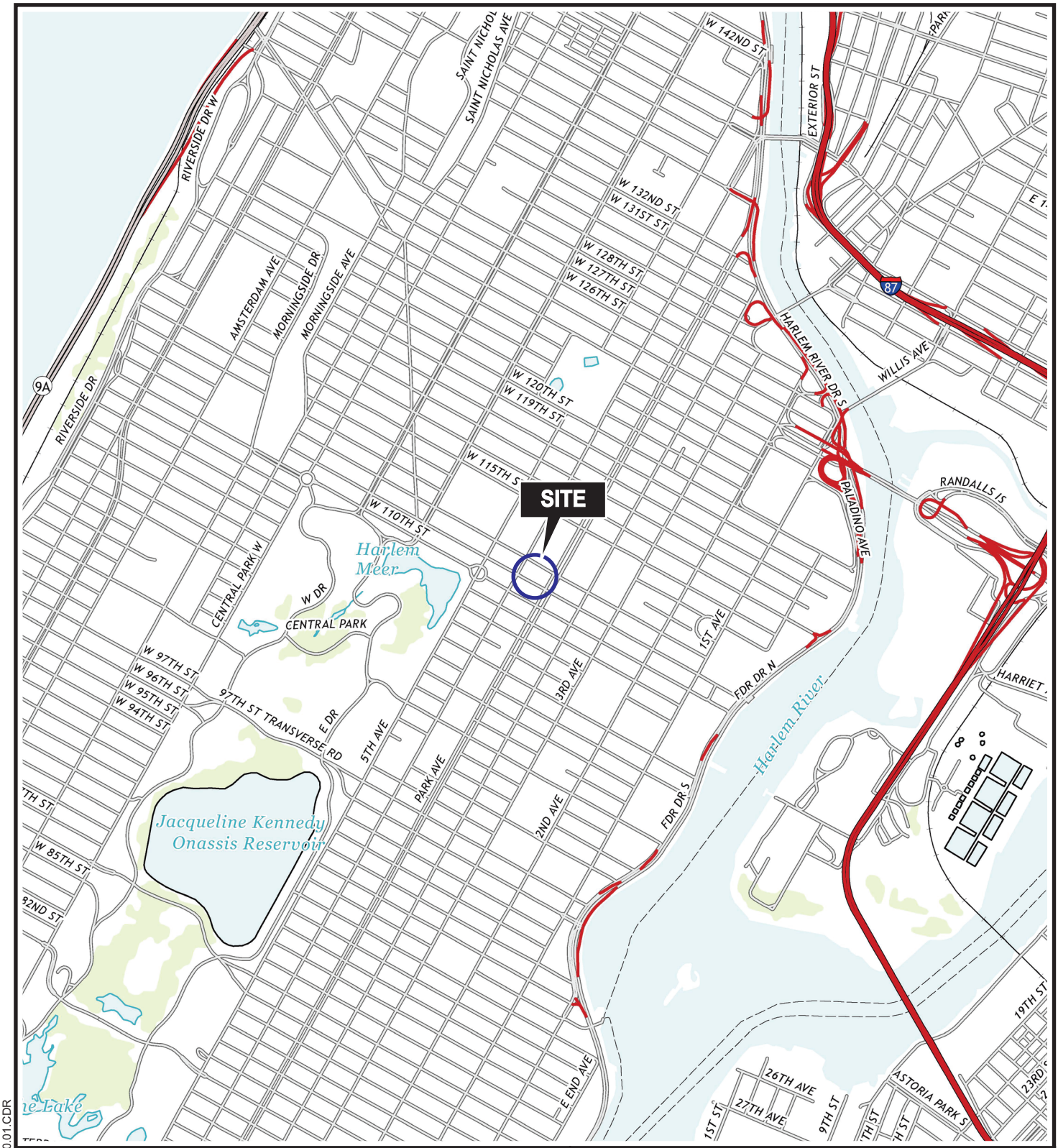
c) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement for the Track 4 area of the site discussed above; and
   - Engineering Controls: The cover system for the Track 4 area of the site discussed above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provisions for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

d) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.




QUADRANGLE LOCATION


SOURCE:
USGS; 2013, Central Park, NY
7.5 Minute Topographic Quadrangle

N

0 2000’

Title:

# SITE LOCATION MAP

SENDERO VERDE
REDEVELOPMENT PROJECT - PARCEL A

Prepared for:

SV-A OWNERS LLC

ROUX

| | | | |
|---|---|---|---|
| Compiled by: N.C. | Date: 21DEC20 | FIGURE |
| Prepared by: G.M. | Scale: AS SHOWN | 1 |
| Project Mgr: N.C. | Project: 2984.0002Y002 | |
| File: 2984.0002Y120.01.CDR | | |

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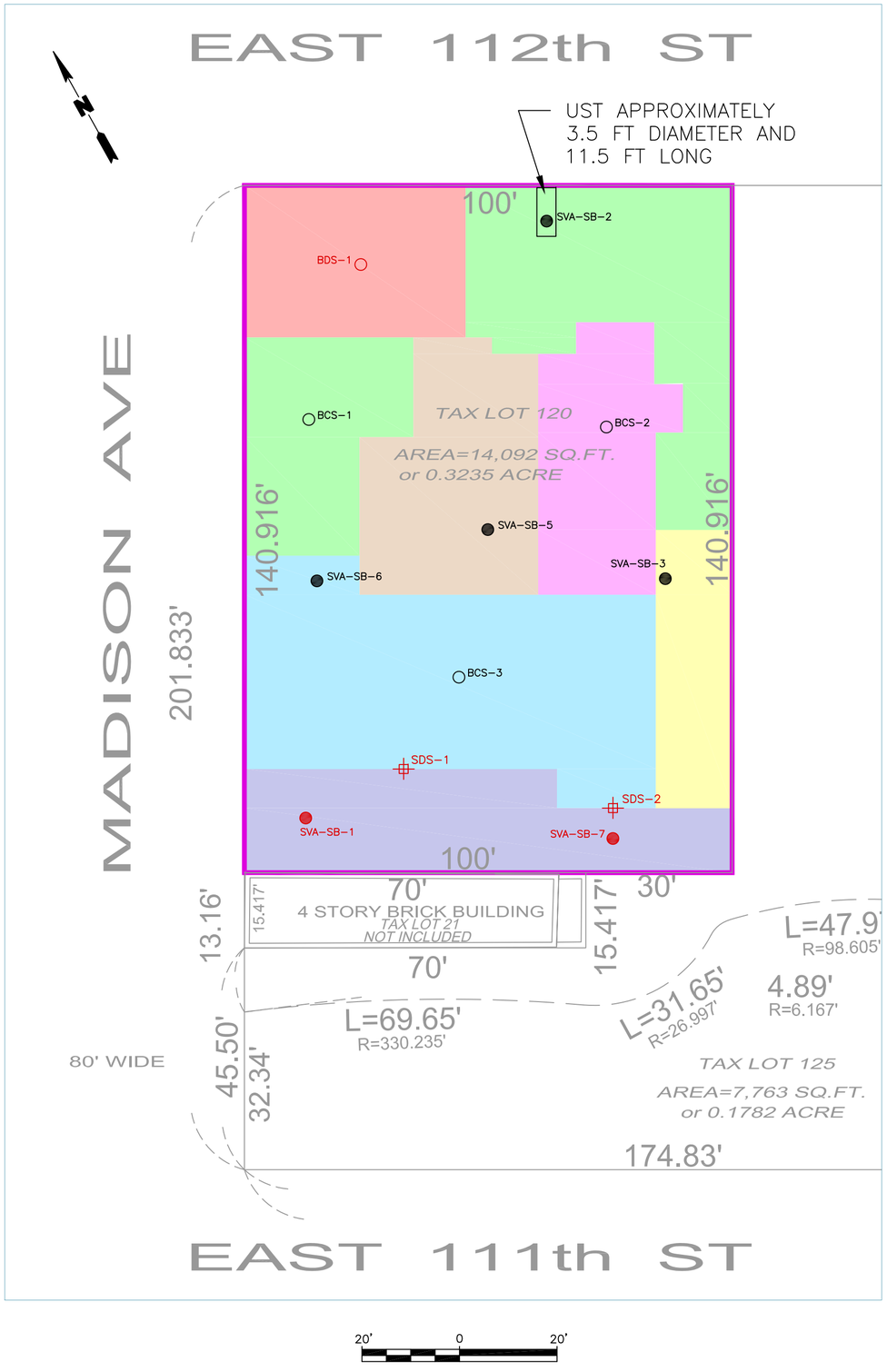


LEGEND

| | |
|---|---|
| | BCP SITE BOUNDARY |
| SVA–SB–2 | LOCATION AND DESIGNATION OF SRI SOIL BORING TO BE USED AS BCS |
| BCS–1 | APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED BCS |
| BDS–1 | APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED BDS |
| SVA–SB–1 | LOCATION AND DESIGNATION OF SRI SOIL BORING TO BE USED AS BDS |
| SDS–1 | APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED SDS |
| UST | UNDERGROUND STORAGE TANK |
| SRI | SUPPLEMENTAL REMEDIAL INVESTIGATION |
| BCS | BOTTOM COFIRMATION SAMPLE |
| BDS | BOTTOM DOCUMENTATION SAMPLE |
| SDS | SIDEWALL DOCUMENTATION SAMPLE |
| RCA | RECYCLED CONCRETE AGGREGATE |
| RIR/RAWP | REMEDIAL INVESTIGATION REPORT / REMEDIAL ACTION WORK PLAN |
| BLS | BELOW LAND SURFACE |
| NYSDEC | NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION |
| UUSCOs | NYSDEC PART 375 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES |
| RRSCOs | RESTRICTED RESIDENTIAL SOIL CLEANUP OBJECTIVES |
| PGWSCOs | PROTECTION OF GROUNDWATER SOIL CLEANUP OBJECTIVES |
| BCP | BROWNFIELD CLEANUP PROGRAM |

| | |
|---|---|
| | TRACK 2 – PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 15 FEET BLS |
| | TRACK 4 – PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 2 FEET BLS. |
| | TRACK 1 – PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 15 FEET BLS TO MEET UUSCOs, SEE NOTE 5. |
| | TRACK 1 – PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 17 FEET BLS TO MEET UUSCOs. SEE NOTE 5. |
| | TRACK 1 – PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 18 FEET BLS TO MEET UUSCOs. SEE NOTE 5. |
| | TRACK 1 – PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 20 FEET BLS TO MEET UUSCOs. SEE NOTE 5. |
| | TRACK 1 – PROPOSED LIMITS OF EXCAVATION TO APPROXIMATELY 32 FEET BLS TO MEET UUSCOs. SEE NOTES 5. |

NOTES

1. BASEMAP ADAPTED FROM SURVEY NO. 65967–2 PREPARED BY MONTROSE SURVEYING CO., LLP, DATED FEBRUARY 1, 2019.
2. ONE UNDERGROUND STORAGE TANK (UST) WAS REMOVED ON NOVEMBER 16, 2020.
3. ENDPOINT DOCUMENTATION AND CONFIRMATION SAMPLES WILL BE A COMBINATION OF EXISTING SOIL SAMPLES AND PROPOSED SAMPLES AS SHOWN. REFER TO SECTION 11.2.1 OF THE RIR/RAWP FOR A DESCRIPTION OF SAMPLING FREQUENCIES AND ANALYTES. LOCATIONS ARE APPROXIMATE AND WILL BE BIASED TOWARD IMPACTS OBSERVED, IF ANY.
4. REFER TO PLATE 7 DETAILS OF THE PROPOSED SITE COVER SYSTEM FOR THE TRACK 4 AREA.
5. BACKFILL FOR THE TRACK 1 PORTIONS OF THE SITE WILL MEET UUSCOs; BACKFILL FOR THE TRACK 2 AND TRACK 4 PORTIONS OF THE SITE WILL MEET THE LOWER OF PART 375 RRSCOs OR PGWSCOs (WITH THE EXCEPTION OF VIRGIN GRANULAR FILL MATERIALS WITH LESS THAN 10 PERCENT PASSING THE NUMBER 80 SIEVE). FILL MATERIALS WITH LESS THAN 10 PERCENT PASSING THE NUMBER 80 SIEVE (I.E., STONE, GRAVEL, ETC.) DO NOT REQUIRE SAMPLING. RCA MAY ONLY BE USED IN THE TRACK 4 AREAS UNDER CERTAIN CIRCUMSTANCES WITH PRIOR APPROVAL OF NYSDEC AND ROUX.

STATE OF NEW YORK
Noelle M. Clarke
No. 072491
LICENSED PROFESSIONAL ENGINEER
4/30/21

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(631) 232-2600

PROJECT NAME:
SENDERO VERDE
REDEVELOPMENT PROJECT - PARCEL A

PROJECT FOR:
SV-A OWNERS LLC

TITLE:
REMEDIAL ALTERNATIVE 2 - COMBINED TRACK UNRESTRICTED USE CLEANUP / TRACK 2 AND TRACK 4 RESTRICTED RESIDENTIAL USE CLEANUP EXCAVATION

PLATE
6

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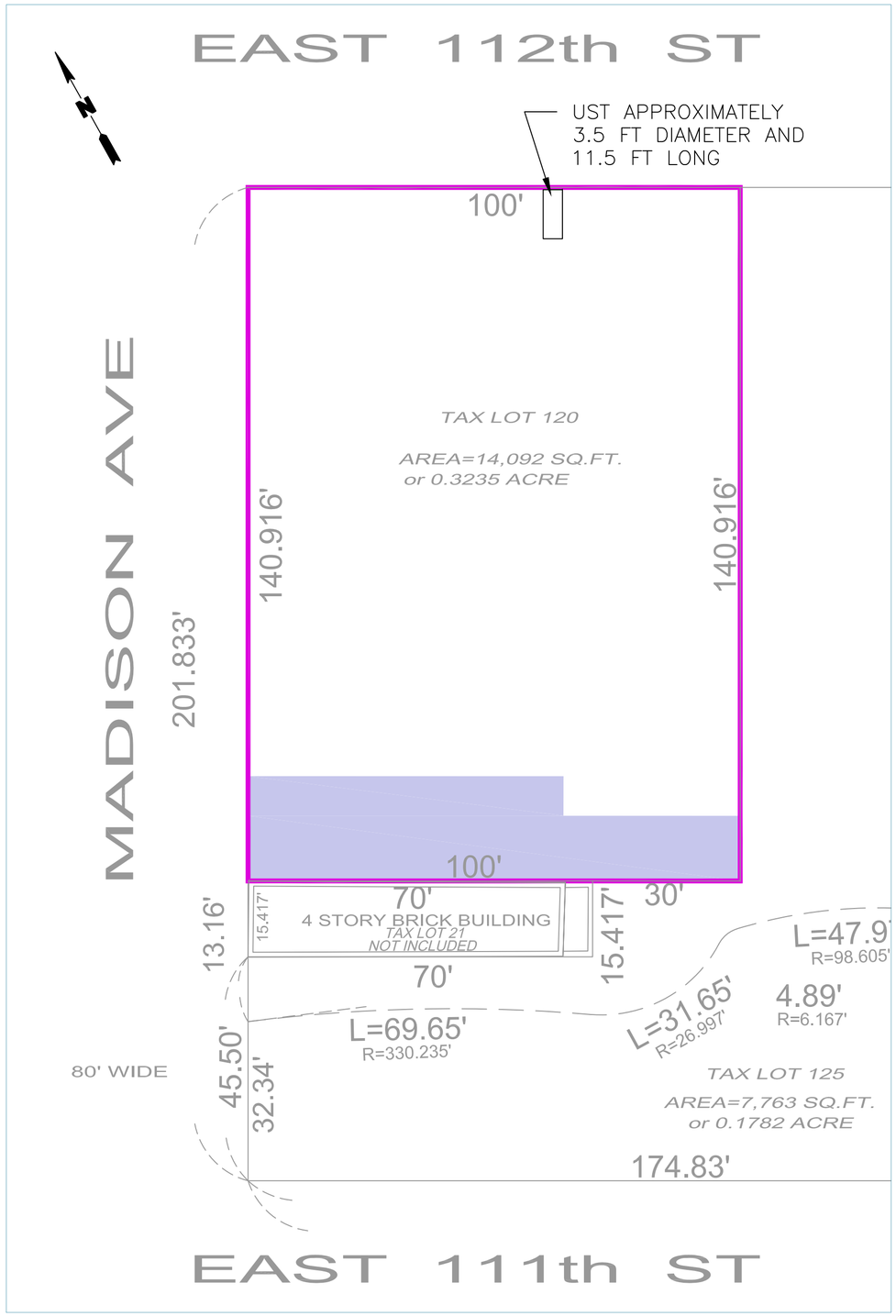
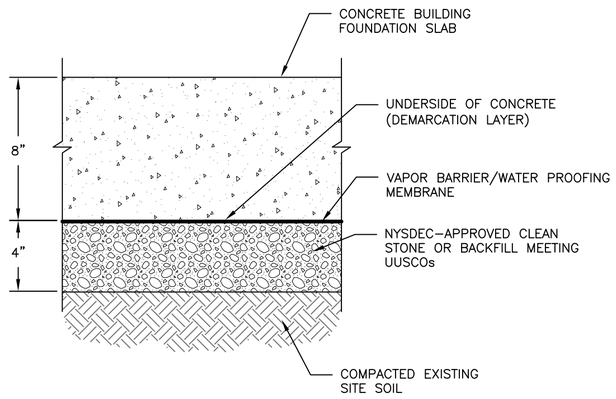
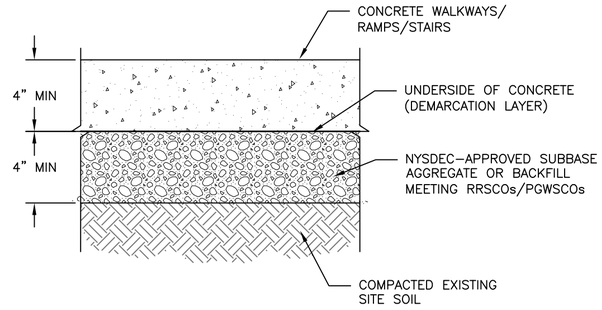



1 PROPOSED SITE COVER SYSTEM:
CONCRETE BUILDING FOUNDATION

SCALE: NOT TO SCALE




2 PROPOSED SITE COVER SYSTEM:
CONCRETE WALKWAYS/RAMPS/STAIRS

SCALE: NOT TO SCALE

LEGEND

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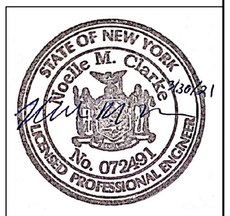
|---|---|
| | BCP SITE BOUNDARY |
| UST | UNDERGROUND STORAGE TANK |
| SRI | SUPPLEMENTAL REMEDIAL INVESTIGATION |
| RIR/RAWP | REMEDIAL INVESTIGATION REPORT / REMEDIAL ACTION WORK PLAN |
| NYSDEC | NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION |
| RRSCOs | RESTRICTED RESIDENTIAL SOIL CLEANUP OBJECTIVES |
| PGWSCOs | PROTECTION OF GROUNDWATER SOIL CLEANUP OBJECTIVES |
| BCP | BROWNFIELD CLEANUP PROGRAM |
| | TRACK 4 – PROPOSED LIMITS OF SITE COVER SYSTEM COMPRISED OF CONCRETE BUILDING FOUNDATIONS/CONCRETE WALKWAY/RAMP AND SUB–BASE AGGREGATE BACKFILL. SEE DETAILS 1 AND 2 AND NOTE 5. |

NOTES

1. BASEMAP ADAPTED FROM SURVEY NO. 65967–2 PREPARED BY MONTROSE SURVEYING CO., LLP, DATED FEBRUARY 1, 2019.
2. ONE UNDERGROUND STORAGE TANK (UST) WAS REMOVED ON NOVEMBER 16, 2020.
3. SEE PLATE 6 FOR PROPOSED EXCAVATION.
4. REFER TO PLATE 7 DETAILS OF THE PROPOSED SITE COVER SYSTEM FOR THE TRACK 4 AREA.
5. BACKFILL FOR THE TRACK 4 PORTION OF THE SITE WILL MEET THE LOWER OF PART 375 RRSCOs OR PGWSCOs (WITH THE EXCEPTION OF VIRGIN GRANULAR FILL MATERIALS WITH LESS THAN 10 PERCENT PASSING THE NUMBER 80 SIEVE). FILL MATERIALS WITH LESS THAN 10 PERCENT PASSING THE NUMBER 80 SIEVE (I.E., STONE, GRAVEL, ETC.) DO NOT REQUIRE SAMPLING. RCA MAY ONLY BE USED IN THE TRACK 4 AREA UNDER CERTAIN CIRCUMSTANCES WITH PRIOR APPROVAL OF NYSDEC AND ROUX.

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TITLE:
REMEDIAL ALTERNATIVE 2 - COMBINED TRACK
UNRESTRICTED USE CLEANUP / TRACK 2 AND TRACK 4
RESTRICTED RESIDENTIAL USE CLEANUP
SITE COVER SYSTEM FOR TRACK 4 AREA

PLATE
7

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